

# **KING COUNTY CERTIFIED EROSION & SEDIMENT CONTROL LEAD TRAINING**

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# COURSE OBJECTIVES

## LEARN TO:

- Assess and manage risks of erosion and sedimentation on construction sites
- Understand water quality regulatory requirements pertaining to the construction industry
- Comply with the Construction Stormwater NPDES General Permit for construction activities
- Know the 13 elements of a SWPPP
- Plan, install, monitor and maintain BMPs that comply with Ecology's Construction NPDES permit
- Provide CESCL certification for attendees



# What Is Covered:

- Impacts of Erosion and Sedimentation - CT
- Regulatory Requirements - DN
- Erosion & Sedimentation Processes - JB
- Factors Influencing Erosion – JB
- BMPs for the 13 Elements of a SWPPP  
CD/JB/CT/EB
- Stormwater Pollution Prevention Planning CT
- Monitoring/Reporting/Recordkeeping CT

# Course Materials on-line

- Construction General Stormwater Permit
  - Permit Application & Relevant Forms
  - SWPPP Template
  - List of Sampling Labs
  - Regulatory Contacts
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- FTP on King County CESCL Training web site.
  - <http://www.kingcounty.gov/environment/water-and-land/stormwater/erosion-sediment-control-training.aspx>

# Special Thanks to the people of:

- Creative Courses
- King County DNRP
- Washington Department of Ecology
- Port of Seattle
- Clark County Community Development
- Clark County Watershed Stewards
- Soil Conservation Society
- National Aeronautical & Space Adminis



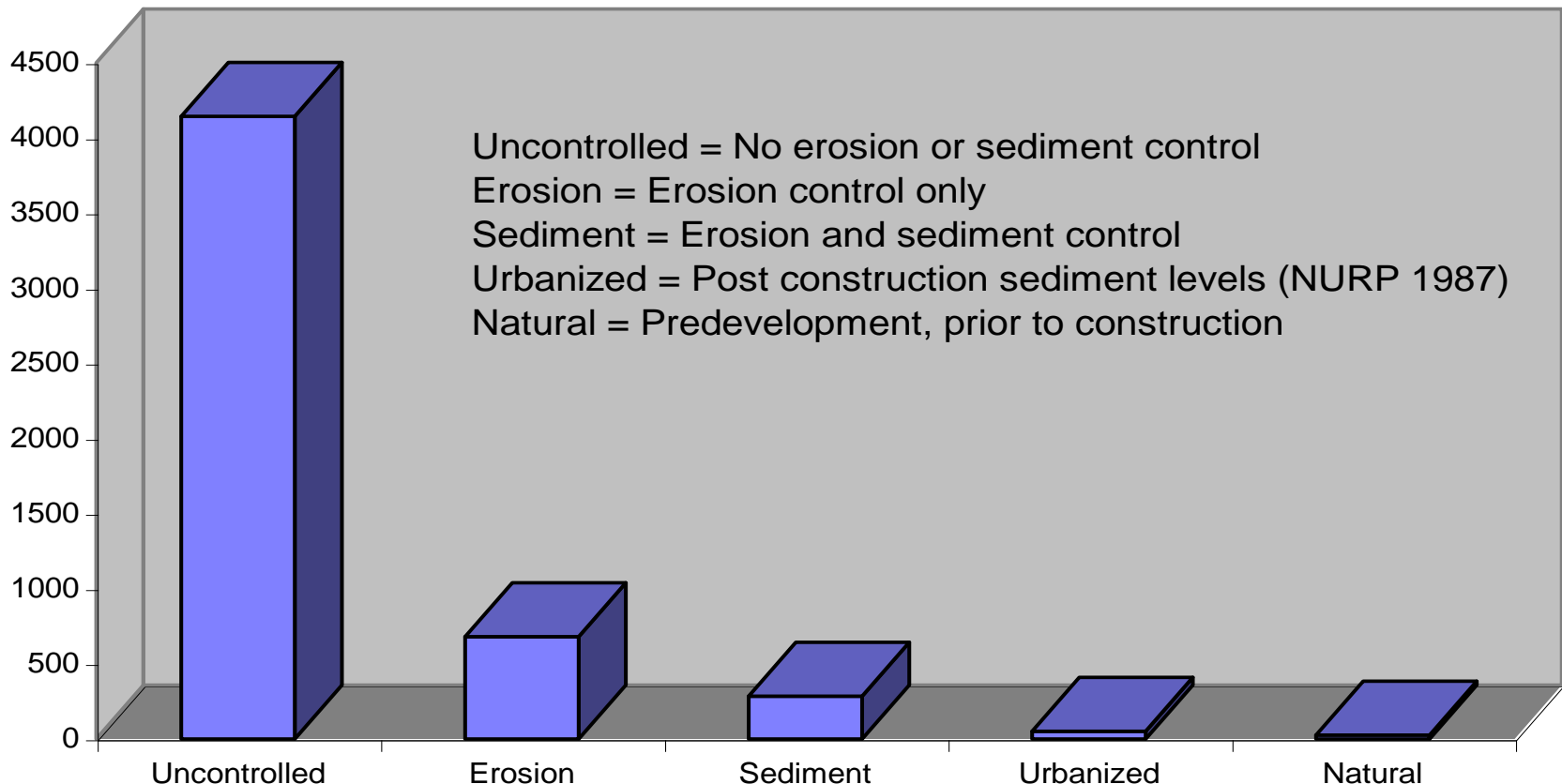


# Why is this Erosion Control Stuff such a Big Deal?

## CONSTRUCTION SITE CONDITION

### STORM MEDIAN SEDIMENT CONCENTRATION (mg/l)

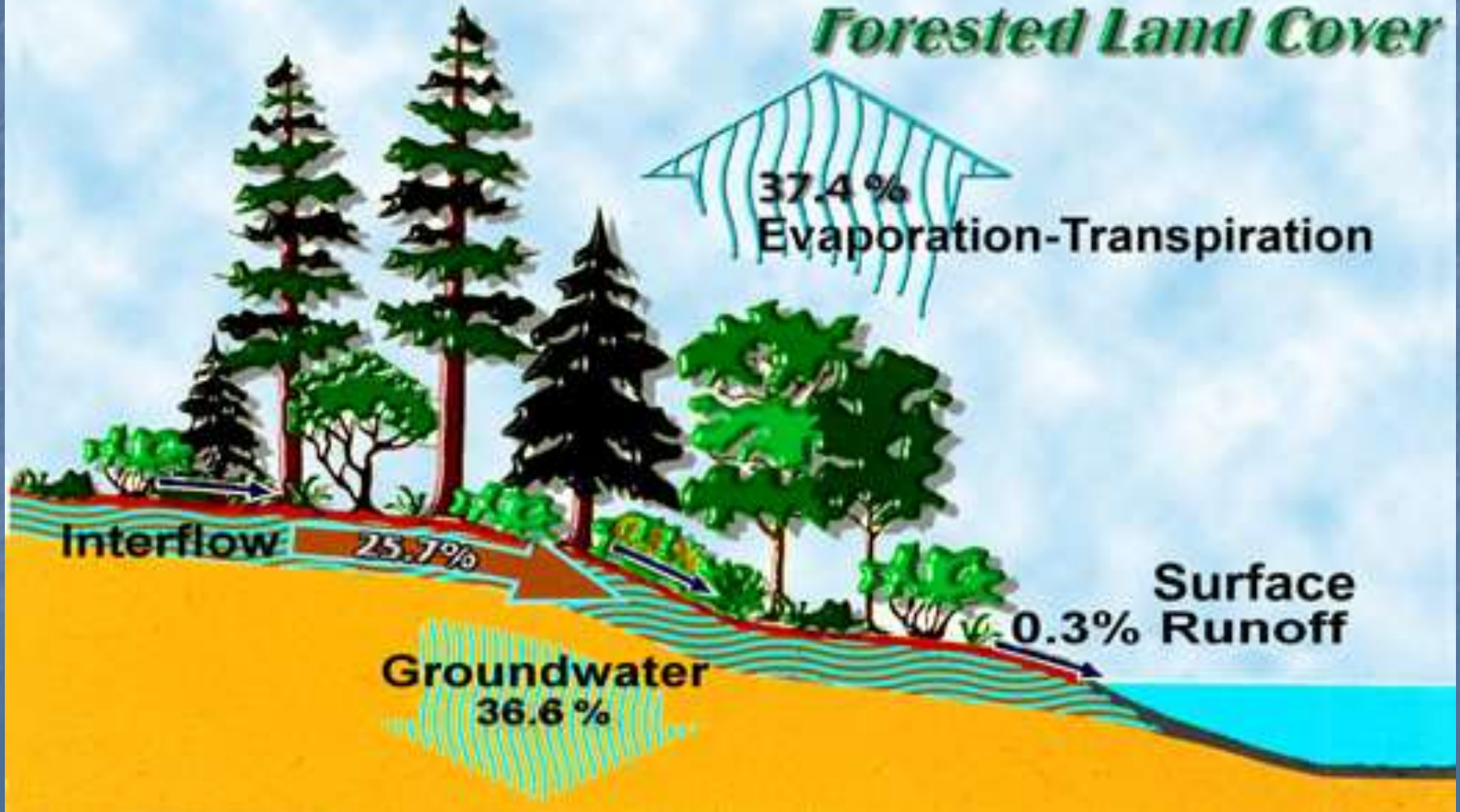
Source: Performance of current Sediment Control Measures at Maryland Construction Sites, Virginia Erosion and Sediment Control Handbook.



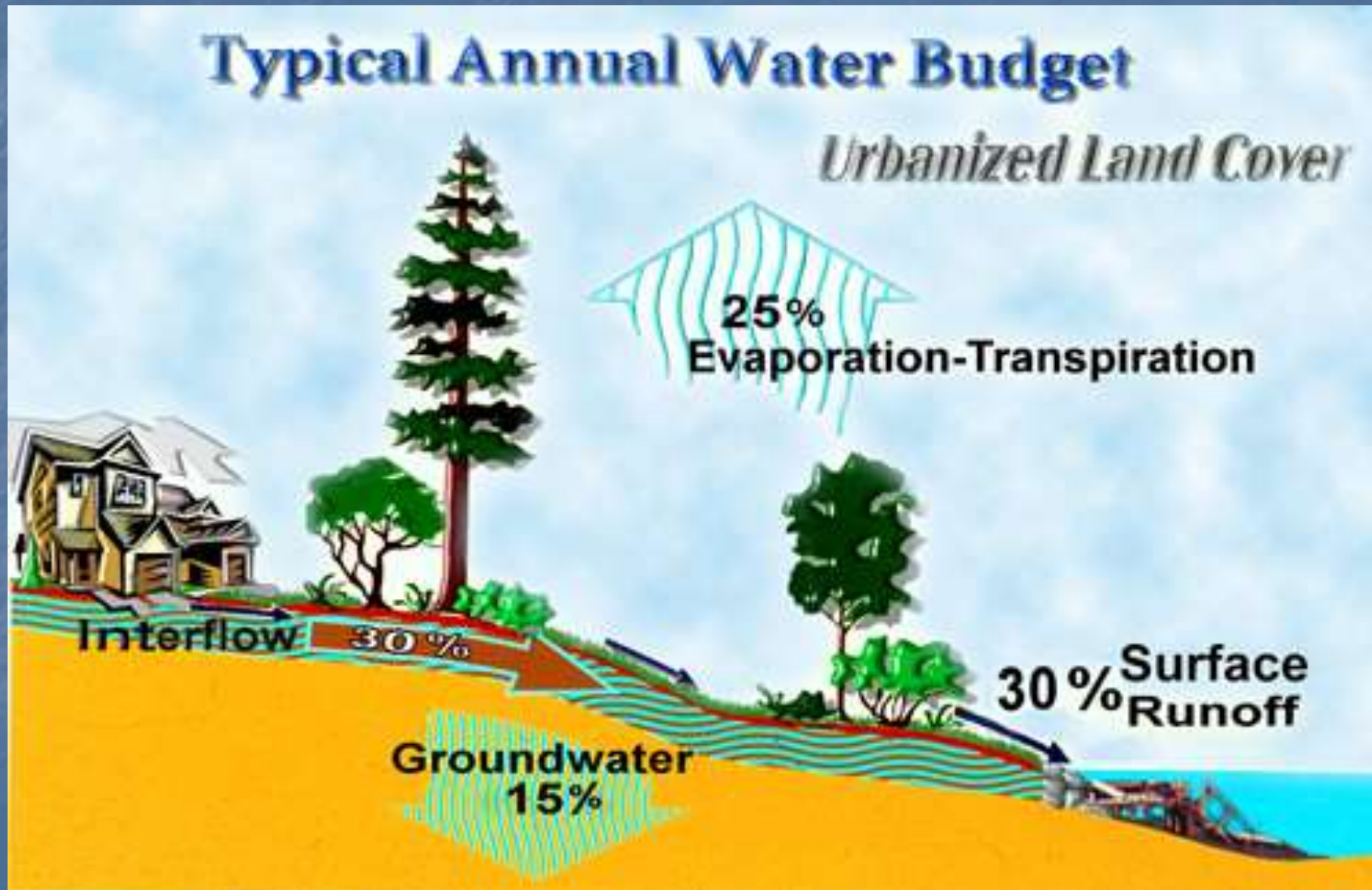
# Natural Conditions

## Typical Annual Water Budget

### *Forested Land Cover*

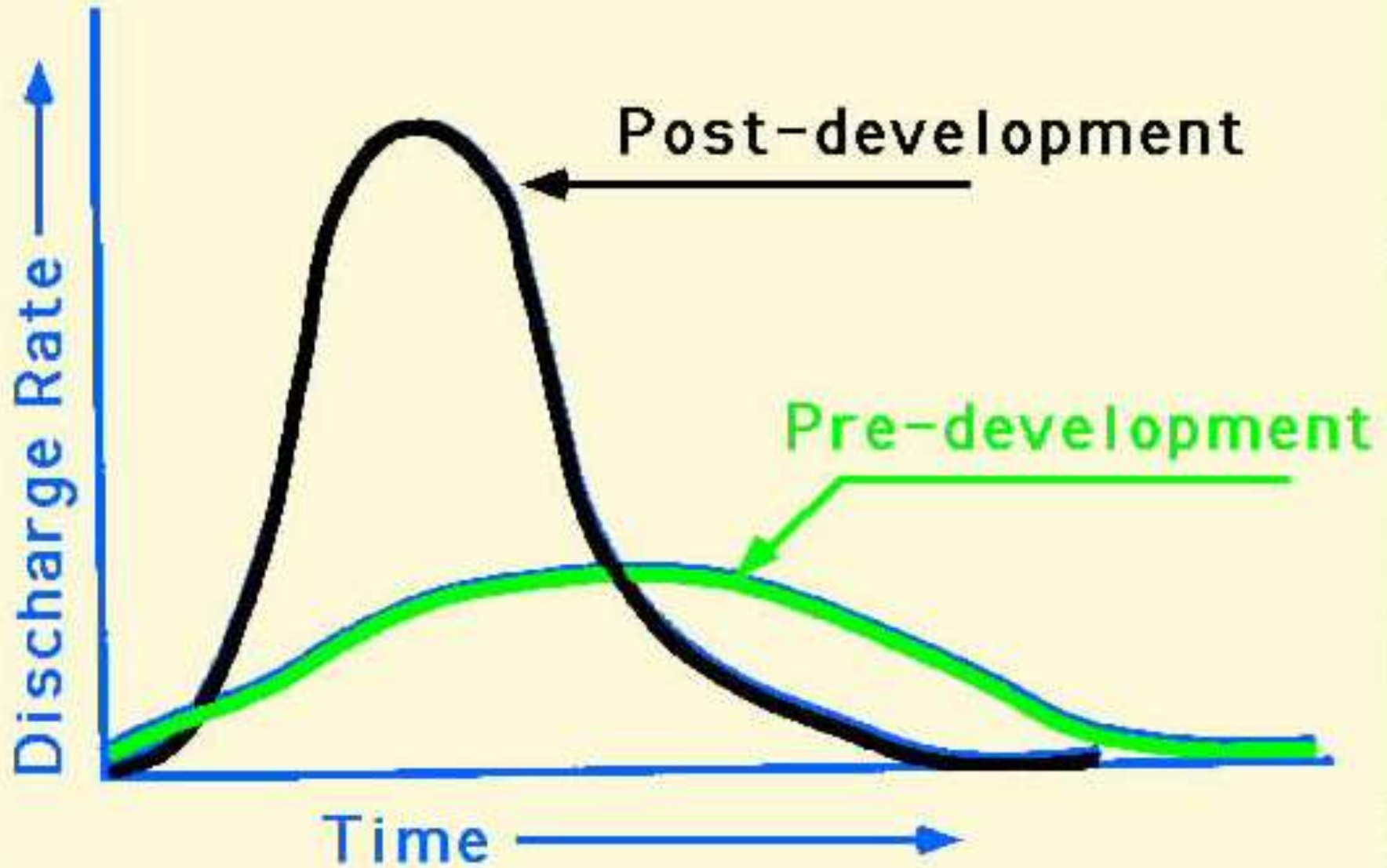


# Developed Conditions





# Runoff Hydrograph



# Sediment Plume from Construction Site - \$\$\$\$ & Stop Work Order-Fines - Costly Cleanups





# Impacts of Erosion and Sedimentation

A yellow excavator is shown in a muddy, eroded area near a body of water. The excavator's arm is extended, and its bucket is partially submerged in the water. The ground is uneven and covered in mud, with some vegetation visible in the background. The scene illustrates the impacts of erosion and sedimentation on construction and the environment.

- 💧 Construction Delays & Increased Costs

- 💧 Legal Costs

- 💧 Mitigation Costs

- 💧 Fisheries Impacts

- 💧 Profitability Impacts

Digging yourself  
Out of a hole





**37 Filters @ \$150.00ea. = \$5,550**

This filter is in a subdivision that has not even started home construction yet





Cleanup Costs :  
Storm System Clean-out & Repair



# Mitigation Costs

## 💧 Offsite Damage to Private Property

- Remove Sediments
- Repair Slopes/ Grades

## 💧 Offsite Damage to Water Resources

- Wetland Mitigation

(\$80,000 to \$100,000 per acre)

- Stream Mitigation





**"Humans - despite their artistic pretensions, sophistication, and many accomplishments - owe their existence to a six inch layer of topsoil and the fact that it rains."**

**-Unknown author**

